VSC 900D

TWO INPUT HIGH RESOLUTION COMPUTER-TO-VIDEO SCAN CONVERTER WITH GENLOCK AND SDI OUTPUT

- Two RGBHV inputs with buffered loop-throughs
- Four simultaneous outputs:
  - Composite video
  - S-video
  - Component or RGB video
  - SDI digital video
- Autoscanning up to 1920x1200
- Auto-Image™ setup
- Eight horizontal filters and four vertical filters
- Sizing & centering controls
- Zoom control with eight presets
- 60 factory and 16 user-accessible auto memory location presets
- Freeze function captures a frame of video for extended display
- Internal multi-test pattern generator
- Video genlock
- RS-232/RS-422 remote control
- Optional IR remote control

The Extron VSC 900D is a two input, high resolution computer-to-video scan converter that combines high performance with superior image processing technologies and an advanced feature set. It is designed for use in demanding, high-end broadcast, production, and presentation environments that require the integration of a variety of signal types.

DESCRIPTION

The Extron **VSC 900D** High Resolution Computer-to-Video Scan Converter combines superior image processing technologies with an advanced feature set engineered for the most demanding broadcast, production, training, and presentation environments. It accepts computer-video signals at resolutions up to 1920x1200 and simultaneously outputs a scan-converted video signal as NTSC or PAL composite video, S-video, component video or RGB video, and SDI serial digital video. With both 5-BNC and 15-pin HD inputs, and buffered loop-through outputs, the VSC 900D is designed for easy integration into any high-end video system application.

The VSC 900D features Auto-Image setup for automatic adjustment of centering, sizing, and filter settings. Additional key features include zoom control up to 200%, a color bar generator, an LCD display for user-friendly menu navigation, memory presets, and buffered loop-throughs for local monitor output.

For broadcast and production applications, the VSC 900D offers a number of special features. Video genlock capability enables synchronization of the VSC 900D video output to an external reference signal. An SDI output is included for integration into digital broadcast and production systems. In addition, the chroma level for the input signal can be attenuated as necessary for proper transmission. The VSC 900D also offers internal test patterns for quick and easy set-up of a monitor or display.

The VSC 900D can be controlled via the front panel, RS-232 or RS-422 serial control, or the optional VSC Remote handheld IR remote control. It is housed in a rack-mountable 1U, full rack width enclosure and is equipped with an internal international power supply.

FEATURES

- **Automatically recognizes and converts computer resolutions from 560x384 to 1920x1200 and frequencies to 100 kHz horizontal and 120 Hz vertical**
- **Buffered loop-through** – Provides a local monitor output, enabling the computer input signal to be monitored without the need for a separate distribution amplifier.
- **Three simultaneous outputs** – NTSC or PAL standard video is output as composite video, S-video, and component or RGB video.
- **SDI output** – The VSC 900 D features a SMPTE 259M - and ITU.R BT-601-compliant SDI serial digital video output that facilitates the integration of computer-video signal sources into digital broadcast and production applications.
- **Auto-Image setup** – Saves time by providing calibration of image size, position, clock, and phase adjustments at the touch of a button.
- **Vertical filtering** – Four selectable vertical filters reduce jitter, improve image quality, and help maintain picture detail.
- **Horizontal filtering** – Eight selectable horizontal filters prevent aliasing or pixel elimination so that less detail is dropped when the image is scanned from left to right.
- **Sizing and centering controls** – User-friendly positioning is accessible through the front panel for quick and efficient image setup.
- **Image zoom control and presets** – Eight zoom presets are available for recalling size, position, and filtering, enabling the user to quickly zoom in on a certain area of an image.

FEATURES - Cont.

- **Input memory presets** – Allow the scan converter to automatically recall up to 16 user presets, 60 factory presets, and eight zoom presets. Each memory location stores filter, size, and centering, or zoom settings for each source which can be recalled instantaneously when switching between different computer-video inputs and resolutions.
- **Image freeze control** – The output video can be frozen using the freeze button on the front panel. This allows the scan converter to capture a frame of video to display for an extended period of time, even after the source has been removed.
- **Internal test pattern generator** – The VSC 900D offers four test patterns – color bars, 32 x 32 crosshatch, 4 x 4 crosshatch, and gray scale – for quick and easy monitor set-up.
- **Video genlock** – All NTSC and PAL video outputs can be synchronized to an external reference signal for integration into broadcast and production applications.
- **Chroma attenuation** – Ideal for broadcast environments where colors in logos and images must be set at 75% saturation for transmission. The VSC 900D has the ability to attenuate an input signal's chroma level down to the correct output level, eliminating the need to recreate the image and/or content.
- **RS-232 and RS-422 serial control port** – Using serial commands, the VSC 900D can be controlled and configured via the Extron Windows®-based control program, or integrated into third-party control systems. Extron products use the SIS™ - Simple Instruction Set command protocol, a set of basic ASCII code commands that allow for quick and easy programming.
- **Optional IR remote control, part # 70-206-01** – The optional VSC Remote handheld IR remote control performs most front panel functions such as image freeze, zoom in and out, size and shift, vertical filter adjustment, and preset selection.
- **Front panel security lockout** – This feature locks out all front panel functions except for input selection; all functions however, are available through RS-232 control.
- **Rack-mountable 1U, half rack width metal enclosure**
- **Internal international power supply** – The 100-240VAC, 50/60 Hz, autoswitchable internal power supply provides worldwide power compatibility.

Optional VSC Remote
Handheld IR Remote Control

VIDEO INPUT

Number/signal type	1 RGBHV, RGBS, RGsB, component video with 1 buffered loop-through 1 RGBHV, RGBS, RGsB with 1 buffered loop-through
Connectors	2 x 5 BNC female (5 BNCs for RGB/component video input, 5 BNCs for RGB/component video loop-through) (1) 15-pin HD female for RGB input, (1) 15-pin HD female for buffered RGB loop-through (RGB)
Nominal level	0.7 Vp-p for RGB
Minimum/maximum levels	0 V to 2.0 Vp-p with no offset at unity gain
Impedance	75 ohms
Horizontal frequency	Autoscan 24 kHz to 100 kHz
Vertical frequency	Autoscan 50 Hz to 120 Hz
Resolution range	Autoscan 560x384 to 1920x1200
DC offset (max. allowable)	2.0 V
External sync (genlock)	0.3 V to 1.0 Vp-p

VIDEO PROCESSING

Encoder	10 bit digital
Digital sampling	24 bit, 8 bits per color
Colors	16.8 million
Horizontal filtering	8 levels
Flicker filtering	4 levels
Encoder filtering	4 levels

VIDEO OUTPUT

Number/signal type	1 RGBHV, RGBS, RGsB, or component video 1 SDI component video (SMPTE 259M-C), 1 S-video 1 NTSC/PAL composite video
Connectors	5 BNC female: RGBHV/RGBS/RGsB/component video 1 BNC female: SDI component video (1) 4-pin mini-DIN female: S-video 1 BNC female: composite video
Nominal level	0.7 Vp-p for RGB
Minimum/maximum levels	0.0 V to 1.0 Vp-p
Impedance	75 ohms

SYNC

Input type	Autodetect RGBHV, RGBS, RGsB
Output type	RGBHV, RGBS, RGsB
Genlock connectors	1 BNC female: genlock input 1 BNC female: genlock output (terminate w/75 ohms if unused)
Standards	NTSC 3.58, PAL, SMPTE 259M-C
Input level	1.5 V to 5.0 Vp-p
Output level	TTL: 5.0 Vp-p, unterminated
Input impedance	600 ohms
Output impedance	75 ohms
Max input voltage	5.0 Vp-p
Polarity	Negative

CONTROL/REMOTE — SCAN CONVERTER

Serial control port	RS-232 and RS-422, 9-pin female D connector
Baud rate and protocol	9600 baud, 8 data bits, 1 stop bit, no parity
Serial control pin configurations	RS-232: 2 = TX, 3 = RX, 5 = GND, 9 = hard-wired IR RS-422: 2 = Tx-, 3 = Rx-, 5 = GNC, 7 = Rx+, 8 = Tx+
IR controller module	VSC Remote
Program control	Extron's control/configuration program for Windows® Extron's Simple Instruction Set (SIS™)

GENERAL

Power	100 VAC to 240 VAC, 50/60 Hz, 30 watts, internal, autoswitchable
Temperature/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Rack mount	Yes, with optional brackets
Enclosure type	Metal
Enclosure dimensions	1.75" H x 17.5" W x 9.5" D (1U high, full rack wide) 4.4 cm H x 44.5 cm W x 24.1 cm D (Depth excludes connectors and knobs.)
Product weight	5.6 lbs (2.5 kg)
Shipping weight	12 lbs (6 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Listings	UL, CUL
Compliances	CE, FCC Class A, VCCI, AS/NZS, ICES
MTBF	30,000 hours
Warranty	3 years parts and labor

NOTE: All nominal levels are at ±10%.

Model	Version Description	Part Number
VSC 900D	With SDI Output	60-478-02

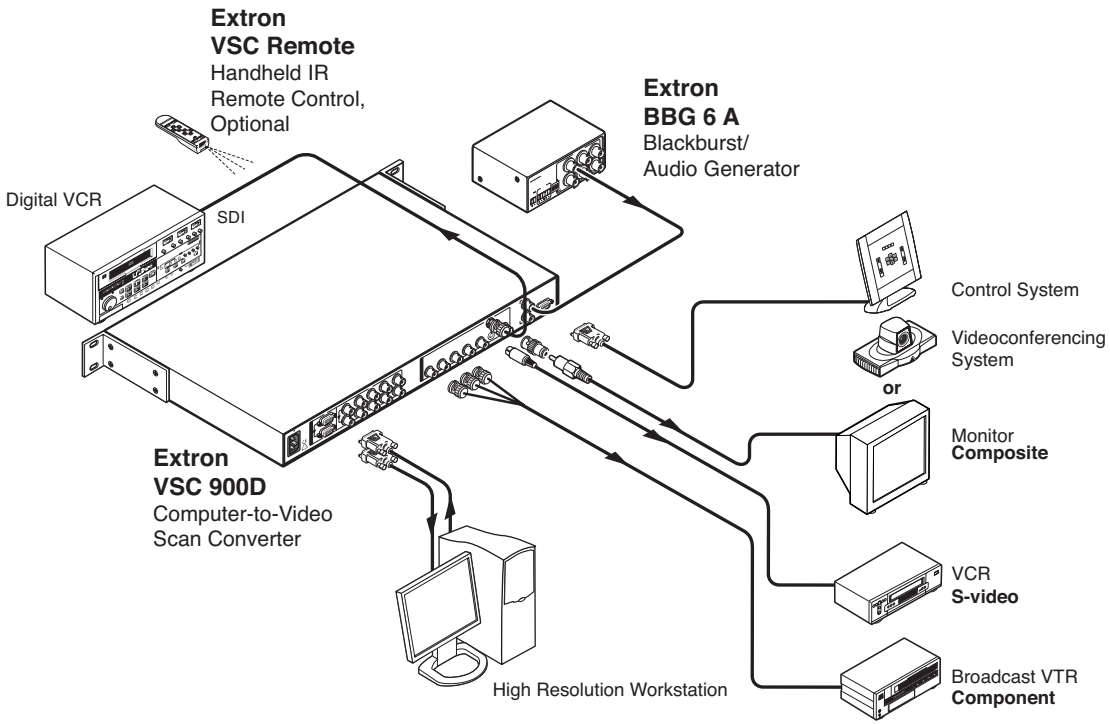
Included Accessories

MBD 149	1U, Full Rack Width, Rack Mount and Through-Desk Kit for Four-Piece Enclosure	70-077-03
MHR-2 SVM-M/6	4-pin Mini DIN Male-Male, 6' (1.8 m)	26-316-02

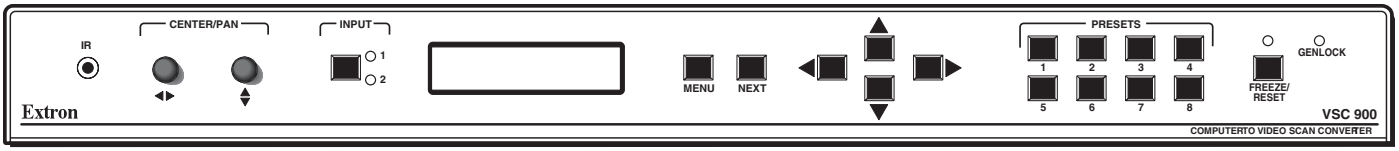
Optional Accessories

VSC Remote	Handheld IR Remote Control for VSC Series	70-206-01
BBG 6 A	Blackburst, Color Bars, and Audio Generator	60-535-01
RCAF-BNCM/10	RCA Female-BNC Male, Qty. 10	100-229-01
SVHSM-BNCF 8" (20 cm)	S-Video Male to 2 BNC Female Adapter, 8"	26-353-01

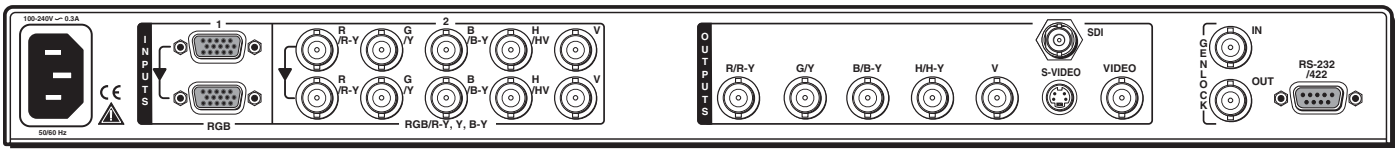
APPLICATION DIAGRAM



PANEL DRAWINGS



Front



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